UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,824	01/11/2002	Joseph Rustad	16010-05885	7891

758	7590	09/21/2005

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EXAMINER
JEAN GILLES, JUDE

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>11 January 2002</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>33-40</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>33-40</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>11 January 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>07/18/2005</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

This Action is in regards to the Reply received on 06/30/2005.

Response to Amendment

1.   This action is responsive to the application filed on 06/30/2005. Claims 1-32

have been cancelled. No claim is amended. Claims 33-40 are newly added. Claims

33-40 are now pending. Claims 33-40 represent a method and apparatus for "Fast

transaction response time prediction across multiple delay sources."

Response to Arguments

2.   Applicant's arguments with respect to claims 33-40 have been carefully

considered, but are not deemed fully persuasive. Applicant's arguments are deemed

moot in view of the following ground of rejection as explained here below.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

4. **Claims 33-40** are rejected under 35 U.S.C. 102(e) as being anticipated by Qin et al
(Qin), Patent No. 6,393,480 B1.

Regarding **claim 33**, Qin discloses a method of predicting the performance of an
application in a multi-hop network, the multi-hop network comprising a client and a
server, the method comprising:

determining, for each thread of the application, a set pf application factors

corresponding to a set of functions performed by the application, the

application factors being independent of the network and of a network flow

control protocol, the application factors comprising average packet size (column

8, lines 46-54) and average node send time (column 4, lines 29-41);

determining a set of network delay times corresponding to a series of network delay

sources along the multi-hop network path, the network delay sources

comprising a queuing delay, a bandwidth delay, a bottleneck delay, and one of

a transmission delay, a constant delay, and a node delay (column 5, lines 3-66;

column 8, lines 1-67; column 9, lines 25-67; column 10, lines 1-65);

determining a set of network flow factors corresponding to the network flow control

protocol, the network flow factors comprising a number of turns added per

direction, the direction relative to the client and the server (column 5, lines 40-67;

column 8, lines 8-62; fig. 8, item 806);

determining a duration of each thread of the application based on the application

factors, the network delay times and the network flow factors (column 5, lines 1-

9); and

determining a total response time based on the durations of the threads (column 5, lines 1-9).

Regarding **claim 34**, Qin discloses the method of claim 33, wherein said determining a set of network flow factors comprises generating a histogram of node send time, and determining the number of turns added per direction based on the histogram (fig. 3, item 306; column 8, lines 8-62).

Regarding **claim 35**, Qin discloses an apparatus for predicting the performance of an application in a multi-hop network, the multi-hop network comprising a client and a server, the apparatus comprising:

means for determining, for each thread of the application, a set of application factors

corresponding to a set of functions performed by the application, the

application factors being independent of the network and of a network flow

control protocol, the application factors comprising average packet size (column

8, lines 46-54) and average node send time (column 4, lines 29-41);

means for determining a set of network delay times corresponding to a series of

network delay sources along the multi-hop network path, the network delay

sources comprising a queuing delay, a bandwidth delay, a bottleneck delay,

and one of a transmission delay, a constant delay, and a node delay(column 5,

lines 3-66;   column 8, lines 1-67; column 9, lines 25-67; column 10, lines 1-65);

means for determining a set of network flow factors corresponding to the network

flow control protocol, the network flow factors comprising a number of turns

added per direction, the direction relative to the client and the server (column 5,

lines 40-67; column 8, lines 8-62; fig. 8, item 806);

means for determining a duration of each thread of the application based on the

application factors, the network delay times and the network flow factors(column

5, lines 1-9); and

means for determining a total response time based on the durations of the thread

(column 5, lines 1-9).

Regarding **claim 36**, Qin discloses the apparatus of claim 35, wherein said

means for determining a set of network flow factors comprises means for generating a

histogram of node send time, and means for determining the number of turns added per

direction based on the histogram (fig. 3, item 306; column 8, lines 8-62).

Regarding **claim 37**, Qin discloses a computer readable medium comprising

computer readable instructions which, when executed by a processing system, cause

the processing system to perform a method of predicting the performance of an

application in a multi-hop network, the multi-hop network comprising a client and a

server, the method comprising:

determining, for each thread of the application, a set of application factors

corresponding to a set of functions performed by the application, the

application factors being independent of the network and of a network flow

control protocol, the application factors comprising average packet size (column

8, lines 46-54) and average node send time (column 4, lines 29-41);

determining a set of network delay times corresponding to a series of network delay

sources along the multi-hop network path, the network delay sources

comprising a queuing delay, a bandwidth delay, a bottleneck delay, and one of

a transmission delay, a constant delay, and a node delay (column 5, lines 3-66;

column 8, lines 1-67; column 9, lines 25-67; column 10, lines 1-65);

determining a set of network flow factors corresponding to the network flow control

protocol, the network flow factors comprising a number of turns added per

direction, the direction relative to the client and the server (column 5, lines 40-67;

column 8, lines 8-62; fig. 8, item 806);

determining a duration of each thread of the application based on the application

factors, the network delay times and the network flow factors (column 5, lines 1-

9); and

determining a total response time based on the durations of the threads (column 5,

lines 1-9).

Regarding **claim 38**, Qin discloses the medium of claim 37, further comprising

computer readable instructions which, when executed by the processing system, cause

the processing system to generate a histogram of node send time and to determine the

number of turns added per direction based on the histogram (fig. 3, item 306; column 8,

lines 8-62).

Regarding **claim 39**, Qin discloses an apparatus for predicting the performance

of an application in a multi-hop network, the multi-hop network comprising a client and a

server, the apparatus comprising:

application factor logic for determining, for each thread of the application, a set of

application factors corresponding to a set of functions performed by the

application, the application factors being independent of the network and of a

network flow control protocol, the application factors comprising average

packet size (column 8, lines 46-54) and average node send time (column 4, lines

29-41);

delay time logic for determining a set of network delay times corresponding to a

series of network delay sources along the multi-hop network path, the network

delay sources comprising a queuing delay, a bandwidth delay, a bottleneck

delay, and one of a transmission delay, a constant delay, and a node delay

(column 5, lines 3-66; column 8, lines 1-67; column 9, lines 25-67; column 10,

lines 1-65);

flow factor logic for determining a set of network flow factors corresponding to the

network flow control protocol, the network flow factors comprising a number

of turns added per direction, the direction relative to the client and the server

(column 5, lines 40-67; column 8, lines 8-62; fig. 8, item 806);

first duration logic for determining a duration of each thread of the application based

on the application factors, the network delay times and the network flow

factors (column 5, lines 1-9); and

second duration logic for determining a total response time based on the durations of

the threads (column 5, lines 1-9).

Regarding **claim 40**, Qin discloses the apparatus of claim 39, wherein said flow

factor logic for determining a set of network flow factors comprises logic for generating a

histogram of node send time, and logic for determining the number of turns added per

direction based on the histogram (fig. 3, item 306; column 8, lines 8-62).

Response to Arguments

5.   Applicant's Request for Reconsideration filed on 06/30/2005 has been carefully

considered but is not deemed fully persuasive. However, because there exists the

likelihood of future presentation of this argument, the Examiner thinks that it is prudent

to address Applicants' main points of contention.

        A. Applicant has cancelled claims 1-32 without prejudice to preserve applicant's

        right to continue prosecution and that applicant does not concede or believes that

        such claims were in fact disclosed or taught by the cited prior art.

        B. Applicant contends that new claims 33-40 have been added and that are

        patentably distinguishable over the cited reference.

6.   As to "Point A" it is the position of the Examiner that the Qin patent in detail

teaches the limitations of the cancelled claims as indicated in the First Office Action

issued on 02/25/2005 .

        As to "Point B", it is also the Examiner's position that the Qin patent clearly

anticipates the limitation of new claims 33-40 [see rejection of claims 33-40 above]

Conclusion

7.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8.   Any inquiry concerning this communication or earlier communications from examiner should be directed to Jude Jean-Gilles whose telephone number is (571) 272-3914. The examiner can normally be reached on Monday-Thursday and every other Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (571) 272-

9000.

Jude Jean-Gilles

Patent Examiner

Art Unit 2143

JJG

September 17, 2005

DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100